DOCUMENT RESUME

ED 220 722 CE 033 967

AUTHOR	Larson, Gordon A.
TITLE	Adult Education for the Handicapped. Information Series No. 240.
INSTITUTION	ERIC Clearinghouse on Adult, Career, and Vocational Education, Columbus, Ohio.
SPONS AGENCY	National Inst. of Education (ED), Washington, DC.
PUB DATE	82
CONTRACT	400-81-0025
NOTE	41p.
AVAILABLE FROM	National Center Publications, National Center for Research in Vocational Education, 1960 Kenny Road, Columbus, OH 43210 (IN240, $4.25).
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Accessibility (for Disabled); Access to Education; *Adult Education; Adult Programs; Ancillary School Services; *Blindness; Community Education; *Deafness; Disabilities; Educational Needs; Educational Resources; Individual Needs; Legislation; *Mental Retardation; *Physical Disabilities; Program Development; Social Attitudes; Special Education; *Special Programs

ABSTRACT

Intended as a general guide for adult educators interested in developing community educational programs for handicapped adults, this monograph gives an overview of facts, problems, and programs peculiar to each of four handicapped populations: the physically handicapped, blind, deaf, and mentally retarded. Following an introduction that defines terms and discusses general legal aspects and problems, each of the population groups is considered in a section of its own. The first section, "Adult Education for the Physically Handicapped," discusses mobility barriers, attitudinal barriers, and some information sources of ideas for specialized programming. The next section, "Adult Education for the Blind," covers special services required in providing education for this population; also described are some existing types of programming for the blind that can be incorporated into an educational program. "Adult Education for the Deaf" discusses the deaf population, social aspects of deafness, educational problems relating to this population, and exemplary programs currently serving its educational needs. The final section, "Adult Education for the Mentally Retarded," presents a definition and categories of mental retardation, discusses educational characteristics and problems of this group, and cites some program techniques that have been successful and some information resources helpful in this area. The document concludes with an appendix of agencies that provide information and services to the handicapped, and a reference section for gathering more information. (DTT)

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ED220722

ADULT EDUCATION FOR THE HANDICAPPED

INFORMATION SERIES NO. 240

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The ERIC Clearinghouse on Adult, Career, and Vocational Education
The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

1982

CE 033 967

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

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FUNDING INFORMATION

Project Title:	ERIC Clearinghouse on Adult, Career, and Vocational Education
Contract Number:	NIE-C-400-81-0025
Educational Act Under Which the Funds Were Administered:	41 USC 252 (15) and PL 92-318
Source of Contract:	U.S. Department of Education National Institute of Education Washington, D.C. 20208
Contractor:	The National Center for Research in Vocational Education The Ohio State University Columbus, Ohio 43210
Executive Director:	Robert E. Taylor
Project Director:	Juliet V. Miller
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This publication was prepared with funding from the National Institute of Education, U.S. Department of Education, under Contract No. NIE-C-400-81-0025 . The opinions expressed in this report do not necessarily reflect the position or policies of NIE or the Department of Education.

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FOREWORD

The Educational Resources Information Center Clearinghouse on Adult, Career, and Vocational Education (ERIC/ACVE) is one of sixteen clearinghouses in a nationwide information system that is funded by the National Institute of Education. One of the functions of the Clearinghouse is to interpret the literature that is entered into the ERIC database. This paper should be of particular interest to adult education practitioners and decision makers.

The profession is indebted to Gordon A. Larson of Rutgers University for his scholarship in the preparation of this paper. Dr. Larson is Assistant Professor of adult education and reading at Rutgers University. As coauthor of the Jossey-Bass sourcebook *Reaching the Hard-to-Reach*, he has examined problems faced by general practitioners in assessing the needs of and designing programs for populations that have not been served adequately by adult education in the past.

Recognition is also due to Larry F. Devane, Butler County Community College, El Dorado, Kansas; to Gladys H. Irish, Kingsborough Community College, Brooklyn, New York; and to Audni Miller-Beach and James Weber, the National Center for Research in Vocational Education, for their critical review of the manuscript prior to its final revision and publication. Susan Imel, Assistant Director at the ERIC Clearinghouse on Adult, Career, and Vocational Education, coordinated the publication's development. She was assisted by Sandra Kerka, David Tipton, and Judith O. Wagner. The manuscript was typed by Carmen Smith, and Janet Ray served as word processor operator. Editing was performed by Constance Faddis of the National Center's Editorial Services.

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Executive Director
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PREFACE

The intent of this monograph is to provide general practitioners and other interested individuals in the field of adult education with some broad guidelines for developing educational programs for handicapped adults. While this appears to be a timely and worthwhile endeavor, it was undertaken with a great deal of concern on the part of the author. The scope of the problem is broad, the nature of the problem is complex, and the variables to be considered are many. Topics that are given a few paragraphs here are often the focus of whole books. Therefore, this paper should be taken as a starting point, rather than as a blueprint for program development. It provides a general discussion of some of the most important problems faced by adult educators and refers the reader to some additional sources of information. It also includes a listing of agencies that are available to provide additional information and supporting services.

As with any synthesis of a large body of literature, this monograph attempts to avoid the pitfalls of being either so general that it becomes vague and no longer practical, or so specific that it becomes cumbersome and difficult to read. Specialists in various fields of education for the handicapped may find portions of this paper too general, while generalists may be lulled into believing that the information provided here is sufficiently detailed to form a basis for action. For each of these audiences I can only urge that they refer to the literature described in this monograph for additional details on specific topics.

Overview of the Monograph

While this monograph is designed as a general overview to be read in its entirety, many busy readers may wish to focus their attention on specific problem areas. They might find it useful to skim through the Introduction, which deals with definitions and problems to be addressed. It is recommended, however, that the reader spend some time reading the brief section on legal aspects. While the legal responsibilities of adult educators are not clearly defined as yet, administrators may find some useful guidelines for action.

The problems of the blind and the physically handicapped are similar in many ways. The major difficulties to be considered are those of attitudinal problems and barriers to mobility. Sections 2 and 3 should be considered together, and the reader is advised to give specific attention to the section on attitudes. The discussion of this particular problem is necessarily brief and superficial, and the reader is urged to do further reading in this area for a better appreciation of the extent to which this topic permeates the literature on all handicaps.

Section 4 deals with problems associated with educating the deaf and hearing impaired. Of the handicapped populations considered in this monograph, the deaf population is in many ways the most fascinating and enigmatic. The literature on the deaf portrays a distinct subculture complete with its own language system and social networks. Language development deficiencies of the deaf pose a considerable problem for educators, and this problem must be clearly understood by those who wish to provide services to this group. This is particularly true for those who would like to provide basic skills education for the deaf. Fortunately, there is a volume

of good information on this subject, and readers are encouraged to refer to the sources cited in this monograph for further enlightenment.

The final section deals with education and training of the educable mentally retarded. While a great body of literature exists related to training of the mentally retarded, much of it focuses specifically on institutional programs. For the most part, institutionally based programs are ignored by this monograph. Instead, this paper focuses on providing education for handicapped adults in an open community environment, a task of great interest to the general adult education community.

EXECUTIVE SUMMARY

Intended as a general guide for adult educators interested in developing community educational programs for handicapped adults, this monograph gives an overview of facts, problems, and programs peculiar to each of four handicapped populations: the physically handicapped, blind, deaf, and mentally retarded. Following an introduction that defines terms and discusses general legal aspects and problems, each of the population groups is considered in a section of its own. The first section, "Adult Education for the Physically Handicapped," discusses mobility barriers, attitudinal barriers, and some information sources of ideas for specialized programming. The next section, "Adult Education for the Blind," covers special services required in providing education for this population; also described are some existing types of programming for the blind that can be incorporated into an educational program. "Adult Education for the Deaf" discusses the deaf population, social aspects of deafness, educational problems relating to this population, and exemplary programs currently serving its educational needs. The final section, "Adult Education for the Mentally Retarded," presents a definition and categories of mental retardation, discusses educational characteristics and problems of this group, and cites some program techniques that have been successful and some information resources helpful in this area. The document concludes with an appendix of agencies that provide information and services to the handicapped, and a reference section for gathering more information.

Literature relating to the topic of adult education for the handicappped can be found in the ERIC system under the following descriptors: *Adult Education; *Physical Disabilities; *Mental Retardation; *Deafness; *Blindness; Disabilities; Program Development; Legislation; *Special Programs; Individual Needs; Social Attitudes; Problems; Ancillary School Services; Access to Education; Accessibility (for Disabled); Educational Needs; Educational Resources; Special Education; Adult Programs. Asterisks indicate descriptors having particular relevance.

INTRODUCTION

Public law and pressures from interest groups representing various types of disabilities have caused educators to make increased provisions for handicapped persons in the past decade. The Vocational Rehabilitation Act of 1973 (P.L. 93-112) prohibits discrimination against otherwise qualified handicapped persons in programs receiving federal assistance (Hollander 1979). Public Law 94-142 mandates adequate educational services for all handicapped children to age twenty-one in the least restrictive environment. As is typical of most issues in education, the greatest impact of this shift in public policy has been on public school and higher education. Accessibility and mainstreaming are issues that relate to modification of the physical structure and policies governing our major educational institutions. Since most adult education programs operate on a marginal basis, largely unsupported by public funding, these laws have had relatively little impact except as they have affected the host institutions housing adult education activities.

The Council for Exceptional Children (1980) notes the significant changes in education for children brought about by implementation of P.L. 93-112 and P.L. 94-142, but states that

> to date, however, little consideration has been given or is occurring with regard to continuing education experiences for handicapped persons beyond the traditional public school experience. (p. 1)

It also notes that continuing education was one of the comprehensive services recommended for the handicapped by the White House Conference of 1976. While there are some excellent continuing education programs in existence for handicapped adults, they are few in number and operate in a variety of settings for a multitude of purposes, generally in the absence of sound state or local policy.

While adult educators may be under less legal pressure to accommodate the handicapped in their educational programs, most program directors are interested in serving the educational needs of all adults in their communities, regardless of their legal obligations. This monograph is intended to provide guidelines for accommodating the needs of the handicapped in adult and continuing education through an examination of problems associated with education for the handicapped and studies of adult education programs that have dealt with these problems. The information base for this paper includes many of the major books on services to the handicapped, recent journals, and the ERIC database.

Scope and Definitions

In preparing this monograph, it was necessary to place some limitations on the types of programs to be addressed. This paper is intended primarily for administrators, counselors, and teachers in general adult education programs who want to expand their services to the handicapped, and for policymakers who need to develop guidelines and provide resources to implement public policy with regard to adult education and the handicapped.

Definitions

Adult education. In its broadest sense, adult education incorporates a range of instructional and learning activities for individuals who have completed or discontinued their formal preparatory education and have assumed the roles and social responsibilities generally associated with adulthood. Philosophically, adult education is tied to Knowles' (1970) assumptions that adults as learners are more experienced, self-directed, problem-oriented, and motivated by the developmental demands of adulthood than are children or adolescents. Some of these assumptions of andragogy are invalid in considering education for handicapped adults. The goals of many of the programs described in the literature are preparatory and developmental in nature. They assume a lack of independence on the part of the adult students they serve. Roessler (1981), for example, states that "the mission of independent living services is to increase the severely handicapped individual's dignity, freedom, and control of personal destiny" (p. iii). Kreps and Black (1980) describe a program designed to prepare mentally retarded adults to live independently and to adapt to the community. The handicapped adults in these situations lack the independence and experience of normal adulthood that is anticipated in designing most adult education programs. Nonetheless, these programs are designed for adults and are related to the roles and responsibilities of adulthood. The subject matter is problem-oriented and intended for immediate application. Many of the programs described in the literature could be integrated into existing general adult education programs with no loss of integrity or major change in operating principles.

At the same time, many of the programs described in the literature on the handicapped require the services of professionally trained specialists in rehabilitation. These institutionally based programs are part of the broad field of adult education and resemble other adult education programs in most of their goals and methods. However, the nature of the services provided is often more properly classified under the rubric of therapy or rehabilitation. Since these types of services are not generally compatible with the resources and goals of the normal community-based, general adult education programs, they are not explored in any depth in this paper. Services such as speech therapy or psychiatric counseling would fall into this category.

Another excluded category is a highly specialized form of education for the severely retarded known as behavior modification. An example of this kind of training is a behavioral modification program for severely retarded bedwetters, described by Smith (1981). This type of educational activity is designed for implementation in the highly controlled environment of a residential institution. While these programs are more educational than therapeutic, the methods and techniques employed are not appropriate for general adult education programs.

In reviewing programs and practices to be included in this paper, the focus was on those that (1) were educational rather than therapeutic, (2) could reasonably be conducted by regular adult education agencies, and (3) serve handicapped persons who have achieved some measure of social independence associated with adulthood.

Handicapped. The term "handicapped" as used in this monograph requires some further clarification and definition. Spiegel and Podair (1981) note that most persons with disabilities prefer to be referred to as disabled rather than handicapped. A disabled person is defined as an individual with a dysfunction that interferes with one or more aspects of daily living at work, school, or in the home. Roessler (1981) suggests that disabilities are manifest in one of the following aspects of human functioning: health, social attitudinal, mobility, cognitive-intellectual, or communications. A handicapping condition arises from the interaction of the disabled individual with his or her social environment. Generally, it results in a loss of independence or self-fulfillment. It has been suggested that use of the term "handicapped" implies that this loss of

independence is a necessary condition of disablement, placing the emphasis on rehabilitation or provision of support services rather than reducing the handicapping effects of the environment.

Despite these negative connotations, the term handicapped is used as a synonym for disabled in this paper because of its wide use in the literature and the law, and because to the layperson it more readily describes the class of disabilities covered by this monograph.

In the broadest sense, the handicapped or disabled include the physically handicapped, the blind, the deaf, the mentally retarded, the emotionally disturbed, persons with speech impairments, and persons with a variety of learning disabilities. Because learning disabilities have been treated in another ERIC monograph (Weisel 1980), they are not covered in this one. To distinguish between learning disabilities and other forms of handicaps, we rely on Jordan's (1977) definition, which describes learning disabilities as those that are not caused by mental impairment, emotional problems, lack of education, or physical or sensory impairments. Learning disabilities normally affect only academic learning, while handicapping conditions manifest themselves in a loss of other social functioning not directly related to performance of academic tasks.

Adults who are emotionally disturbed and persons with speech impairments are normally dealt with through therapy by trained specialists. While persons with these handicaps may be served by the adult education community, they are not considered as special problems in this paper. The literature search was generally limited to articles on adult education services for the handicapped in general, and on services directed to the blind, the physically handicapped, the mentally retarded, and the deaf. Each of these disabling conditions carries its own requirements for specialized treatment, which are described in the sections of this monograph related to specific handicaps. At the same time, many provisions apply to all handicapping conditions, and these are treated in the general sections on service to the handicapped.

Legal Aspects

What are the legal responsibilities of adult education programs in providing services to the handicapped? Public Law 94-142 establishes basic educational rights for children up to age twenty-one, but makes no provisions for adults beyond that age. The provisions of P.L. 94-142 guarantee due process in the classification procedures, protect against discriminatory testing, require individualized instructional plans, and require placement in the least restrictive educational environment (MacMillan 1977). For the most part, these are issues that are seldom of concern to adult education, so the law provides little useful guidance as well as limited legal impact on the area of adult education. The provision for education in the least restrictive environment has some potential import for adult education, however, if the principle is extended to educational services in general. Much of the education of the handicapped takes place in special institutions that tend to segregate the handicapped from the mainstream of society. From the perspective of the disabled person, this is usually an undesirable situation. Recent trends in rehabilitation are toward deinstitutionalizing many services to the handicapped. While it is unclear whether this change will place any legal obligation on adult education agencies, it will probably create new markets for those who want to provide services to the disabled.

Even though adults are not provided for under P.L. 94-142, they undoubtedly are protected under the Vocational Rehabilitation Amendments of 1973 (P.L. 93-112), an omnibus law designed to eliminate discrimination against the handicapped. The law applies to all programs receiving federal financial assistance, and contains three major provisions of concern to adult educators. Section 502 requires the elimination of architectural barriers that prevent use by handicapped

individuals. Section 503 requires affirmative action in the employment of the handicapped (Hollander 1979). The most significant provision, however, is Section 504, which reads as follows:

> No otherwise qualified handicapped individual in the United States, as defined in Section 7(6) shall, solely by reason of his handicap, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal assistance. (LaVor 1981, p. 36)

As LaVor notes, the provision was passed through Congress without hearings, and the full intent of Congress is not clear. The law does not stipulate what constitutes reasonable accommodation of the handicapped or what kinds of modifications must be made in programs. There are no provisions for paying for any special services that are required, and it is not clear whether local programs must assume the cost of providing special services such as interpreters for the deaf, or braille texts for the blind. In the only test case of this law that has reached it to date, the Supreme Court ruled that a college was not required to accommodate a woman who applied to a nursing program despite a serious hearing loss. LaVor contends that this was a poor test case of the law and that cases working their way through the system at this time will address more substantial issues.

In the absence of a clear legal mandate, it is difficult to define just what services adult educators are obligated to provide. Clearly, directors must admit handicapped adults to their programs when their admission would not require significant alterations of the physical environment or the instructional process. Handicapped individuals cannot be discouraged from enrolling in courses because they might create discomfort among other students, or because of unwarranted concerns that they might not be able to participate fully in the instruction. For example, it would be illegal to bar a blind or deaf person from taking swimming lessons because of some irrational fear that the individual would not be able to participate adequately or would disrupt the instructional process. On the other hand, it is questionable whether adult education agencies could be legally required to provide paid interpreters for the deaf in all classes.

As a general rule, handicapped adults should be integrated or mainstreamed into the total educational program to the maximum extent possible. Program directors should ensure that their administrative and instructional staff are adequately prepared to deal with attitudinal problems that might arise in serving the handicapped, and should be vigilant in detecting and eliminating unnecessary physical and attitudinal barriers to participation.

General Problems to Be Addressed

What are the general problems that the handicapped face in participating fully in educational activities? The Council for Exceptional Children (1980) has identified three areas of concern:

1. *Accessibility*. To what extent do handicapped adults have the right and opportunity to participate in existing programs, and what program options are available to them? Are the architectural barriers to participation removed, and does the institution provide for supplementary aids for various handicapping conditions?

2. *Specially designed instruction*. Are the needs and interests of handicapped individuals assessed in the program planning process? To what extent are modifications in program design made to accommodate various handicapping conditions? Does the agency or the community make provisions to support specially designed instruction?

3. Cooperative planning. To what extent are the needs of the handicapped addressed in community development planning? Are community resources provided to meet the special needs of the handicapped? As will be described in discussing various programs, adult education agencies could make use of libraries and other public agencies in serving the special needs of the handicapped.

Roessler (1981) sees the basic problem faced by the handicapped as one of increasing their dignity, freedom, and control of their personal destinies. A number of authors have noted that the major problem facing the handicapped is the lack of acceptable social interaction with the community at large (Marinelli and Dell Orto 1977; Wells 1977). A large part of this is due to the general public's aversion to dealing with handicapped individuals. Much of the motivation for institutionalizing the disabled has been to segregate them from society rather than to provide for their needs. The entire rehabilitation process has been criticized for placing too much emphasis on "normalizing" the handicapped individual, rather than modifying the hostile environment and preparing society to accept the handicapped. Park (1977) attributes society's lack of acceptance to a social policy based on the frontier philosophy of rugged individualism, rather than on the philosophy of interdependence found in most advanced societies.

At the same time, Marinelli and Dell Orto (1977) claim that persons with disabilities often lack the interpersonal and social skills necessary to cope successfully with nondisabled persons in the community. The handicapped are particularly maladroit at discussing the stigmatizing effects of their disabilities because they are rarely taught these skills. This is an educational problem that might be addressed by adult educators with guidance from other professionals.

Beyond the attitudinal problems confronting handicapped individuals, their problems generally fall into one or more of the following categories:

- Loss of mobility
- Diminished cognitive or intellectual capacity
- Loss of communication skills

Often, nondisabled persons tend to ascribe more deficiencies to the handicapped than are actually manifested by their disabling condition. Wells (1977) observes that the nondisabled tend to think of the physically disabled as being mentally deficient, when they are not. The literature suggests that this is equally true for the deaf and the blind. Because of these and other prejudices, the disabled are often discriminated against in employment, education, and other social activities. In attempting to integrate the handicapped into the mainstream of adult education, directors need to be sensitive to these prejudicial tendencies and to take steps to overcome them. Often, it seems more comfortable and less threatening to segregate the handicapped (Wells 1977), and the handicapped themselves may support such a policy, preferring to seek out "their own kind" rather than face the social problems and patronizing attitudes of the nondisabled in an integrated environment. Acquiescence to these pressures may sacrifice one of the greatest potential benefits of programming for the handicapped, the potential for reducing prejudicial attitudes in the community toward the disabled.

ADULT EDUCATION FOR THE PHYSICALLY HANDICAPPED

According to the National Center for Health Statistics' 1970 figures, some 23.6 million persons, or 11.8 percent of the population, have some long-term reduction in physical activity resulting from chronic disease or impairment (Marinelli and Dell Orto 1977). Generally, the problems associated with physical disability fall into two categories: (1) psychological or attitudinal and (2) loss of mobility. Physical disability can result from disease or injury and is more likely than other handicapping conditions to occur later in life.

Mobility Barriers

Jones and Catlin (1981) have explored several reasons why the physical world is the way it is. They note that early civilizations were built on elevated sites to avoid flooding and vermin, and that the highest points were generally occupied by the most powerful in the society. Therefore, in order to achieve acceptance, both public and private buildings have traditionally been constructed so that they rise at least one level from the ground. Steps are used because they are a more efficient means of changing levels than are ramps, which take more space. Architectural barriers exist for functional reasons as well as tradition. Floors are raised above ground to prevent rotting, and thresholds are designed to prevent rain or drafts from entering rooms. Thus, architects have traditionally been trained to develop buildings in a way that makes access for the disabled unnecessarily difficult.

Dorothy Jeffrey (1973) estimates that one out of every ten persons has a disability that prevents him or her from using buildings designed for the physically able. For years, rehabilitation was geared to treating the disabling condition rather than modifying the environmental conditions that transformed the disability into a handicap. The Vocational Rehabilitation Act of 1973 shifted the nation's resources toward making the environment less hostile to the physically disabled. Under this act, colleges and universities were given until June 3, 1980, to make structural modifications necessary to ensure full accessibility to the handicapped (Coons and Milner 1978).

Critics have claimed that recent standards are extreme and add unnecessary expense for the sake of a small minority of the population, but Jones and Catlin (1981) point out that many of these required changes will also benefit persons other than the handicapped. Levers are easier to use than round doorknobs for persons with their hands full. Wide doorways facilitate movement of furniture and equipment as well as wheelchairs. In general, buildings that are more accessible to the handicapped are more usable for other purposes as well.

For the most part, adult educators are not directly responsible for the design of the facilities that they use for their courses, and the responsibility of making them accessible lies with the host institution. Nonetheless, adult educators should be aware of the physical barriers to participation and do what they can to eliminate or avoid them. It is outside the scope of this paper to discuss the specifics of the process of making architectural modifications. Those who are interested may find it helpful to refer to Coons and Milner's *Creating an Accessible Campus* (1978).

A mobility barrier of greater concern to adult educators is the availability of transportation. Bowe (1981) states that transportation is the critical component of independent living for the disabled. Much of the discussion in the literature on transportation relates to modifications required in mass transportation to accommodate the handicapped, and is beyond the scope of this paper. Of greater importance is the need to recognize the requirement for providing transportation for the handicapped to and from adult education activities. Organized car pooling, use of school buses, and arrangements for use of other community transportation resources are some of the ways that adult educators can overcome transportation barriers.

Attitudinal Barriers

While much has been done and continues to be done to remove architectural barriers facing the physically handicapped, a much less obvious, but equally effective, barrier has received less attention from policymakers and educational practitioners alike. The psychological and attitudinal barriers to participation have received much attention in rehabilitation literature, but scant notice in actual practice (Wells 1977).

Cogswell (1977) advises that physical disability results in fewer social contacts in the community, less frequent appearance in community settings, and a reduction in the number of different social roles played. While some of this reduction in interpersonal contact may be a result of decreased mobility, Cogswell places a large share of responsibility on the absence of training in social skills that are necessary to relate successfully with the nondisabled in the community. Marinelli and Dell Orto (1977) echo this sentiment, noting that the physically handicapped are particularly maladroit at communicating with the nondisabled about the stigmatizing effects of their disabilities because they are seldom taught these skills.

Preparing the physically handicapped to interact successfully in a social environment is more a function of therapy and rehabilitation than it is of general education, but adult educational agencies have a responsibility to educate the public, particularly their own staff and students, about the true nature of disabilities and how to deal with the disabled. In reviewing the literature, one is overwhelmed by a recurring complaint voiced by the handicapped that they are not accepted by the larger community. Cahak (1979) suggests that the greatest barrier to normalization of the handicapped is the attitudes of the nondisabled to the impaired, and the reciprocal attitudes of the disabled toward the public. He notes that elements of our culture teach us to avoid the disabled, and the disabled respond with a variety of psychological reactions, including denial and withdrawal.

English (1977) has made a study of social correlates of stigma toward the physically disabled. He suggests that the disabled are treated as a minority, and that they suffer similarly from prejudices, segregation, and stereotypic descriptive jargon. These stigmatizing prejudices are stronger among males than females, and occur less among Catholics than among other religions. While persons with more education generally have more positive attitudes toward the handicapped, this is not true for employers or college counselors.

Ladieu-Leviton, Adler, and Dembo (1977) point out the difference between "nonparticipation" and "nonacceptance" in social activities. Nonparticipation involves reasonable abstinence from social activities based on realistic limitations of a disability. Nonacceptance, on the other hand, is a one-sided resistance or reluctance to admit the handicapped to various kinds and degrees of social relationships. They assert that the nondisabled tend to overestimate the physical limitations imposed by disabilities and suggest that the disabled themselves be allowed to decide their own level of participation. For example, the disabled person may decide to go along to

watch others fish, or to referee a game in lieu of participating. We are cautioned to avoid negative reactions to inconveniences caused by waiting for the handicapped and to avoid assuming that the disabled have an inferiority complex as a result of their condition.

How can adult educators work to overcome attitudinal problems in their programs? Anthony (1977) has studied the relative effectiveness of different methods in changing people's attitudes toward the handicapped. Merely bringing persons into greater contact with the handicapped has little or no effect on attitudes. Providing information increases people's knowledge, but has little effect on attitudes either. Anthony finds that the greatest effect on attitudes results from a combination of information and contact. This suggests that it is not sufficient to mainstream the handicapped without providing information, or to run classes on the subject without increasing contact. The most effective approach would involve providing information sessions in classes in which the handicapped participate. One possible method for accomplishing this might be through use of films or slides. Bennet (1976-1977) has developed an annotated bibliography of informational films and slides related to various handicapping conditions. These materials may be available through regular libraries or through special regional libraries serving the blind and physically handicapped (Huffman 1980; Layne 1980; Library of Congress 1980; Strom 1977).

Programs for the Physically Handicapped

For the most part, the physically handicapped are able to participate in normal educational offerings once they have overcome the barriers of accessibility. However, adult educators may find it useful to develop special programs for the disabled in order to get past their natural tendencies toward withdrawal and isolation. While the literature in this area is somewhat sparse, a few books and articles suggest ideas for specialized programming. One of these is *Independent Living for the Handicapped and the Elderly* by May, Waggoner, and Hutte (1974). This is a how-to book on home modifications that can be made and skills that can be learned to aid the physically handicapped in achieving independence. While there is no indication that this material has been used in an adult education course to date, it offers some real possibilities for specialized programming.

Other possibilities for special programs are suggested by materials from the American Alliance for Health, Physical Education, Recreation and Dance in Reston, Virginia. Two papers available through the ERIC system are *Principles and Practices for Championship Performances in Wheelchair Field Events* (American Alliance 1980) and *Track Events* (American Alliance 1979). Another paper (Harris 1979) provides detailed instructions for *Dance for Students with Orthopedic Conditions—Popular, Square, Folk, Modern, and Ballet*. Although these instructional programs are designed for use with children, they would be a natural addition to adult education programs as well.

ADULT EDUCATION FOR THE BLIND

Visual impairment includes a variety of eye conditions ranging from limited central vision to limited peripheral vision to total blindness (Arsenault 1979). The focus in this section is on the legally blind, whose lack of sight constitutes a serious limitation to their mobility. The blind are few in numbers compared to individuals with other handicaps. Lukoff and Whiteman (n.d.) estimate the incidence of legal blindness at two out of every thousand. The majority of the legally blind have some vision, and over half of the blind are beyond their normally productive years. Several authors on the subject suggest that blindness enjoys a privileged position among handicapping conditions. Blindness attracts more public attention and support than other handicaps (Baumann 1972; Lukoff and Whiteman n.d.). Ten times more legal action is taken over blindness than for any other disability. The blind qualify for special tax exemptions, postage adjustments, and free traveling companions (Baumann 1972). This special treatment for the blind has been ascribed to the fact that people fear blindness more than any other disabling condition (ibid.; Monbeck 1974).

This fear exists despite the fact that blindness tends to be less handicapping than other forms of disability. Baumann notes that blind children have been integrated in regular schools for years, and those specialists who work with the blind see little need for special colleges for the blind, while there have been special colleges for the deaf since 1864.

The greatest effect of blindness is the loss of mobility and its attendant loss of independence. The blind are unable to participate in many physical activities such as sports or driving, and their ability to travel freely is somewhat limited. Unlike deafness, the loss of sight places few limitations on learning capacity. Some concepts related to sight, such as color differentiation, are unavailable to the congenitally blind, but this does not pose a serious threat to intellectual development (Baumann 1972; Lukoff and Whiteman n.d.).

Those who lose their sight later in life commonly experience psychological problems in adjusting, often to the point of denying the loss of sight. Contrary to popular opinion, loss of sight is not compensated for by an increase in other senses. The truth is that the blind become more aware of other forms of sensory input as they grow more dependent on them for guidance.

Services Required

The major accommodations that adult educators must make to provide services to the blind are similar to those made for the physically handicapped. Transportation services will solve many of the problems of attracting the blind to adult education offerings. Additionally, directors and staff members need to be conscious of physical factors that may impede the mobility of the blind. The blind may require some assistance in getting from one point to another within a facility, but can generally participate freely in most activities once there.

Instructors should be oriented to avoid certain practices that are troublesome to the blind, such as vague visual references to "this" and "that." Additionally, instructors and nondisabled

students could be oriented to avoid the most common patronizing behavior and stereotypes that are irritating to the blind. Monbeck (1974) suggests that people expect the blind to be more contemplative, inner-directed, unfriendly, aloof, self-pitying, hypersensitive, and prone to anger. Most important, the notion that the blind are helpless should be discouraged through contact and information.

While attention to physical and attitudinal barriers will overcome many of the major problems of serving the blind, directors should be aware of technological devices available for the blind that may be purchased or coordinated through other agencies. Some of the more revolutionary devices, such as the Kurzweil Reading Machine (Kurzweil and Unger 1977), are beyond the reach of most adult educators, but many instructional support services, such as talking books, braille writers, recorded disks, cassettes, and books in braille, may be obtained through any of the seventeen regional libraries for the blind and physically handicapped (Layne 1980; Wanger, Huff, and Cuadra 1981).

Programming for the Blind

For the most part, regular adult education programs will be suitable for blind persons. Dickman (1977) suggests that the most important need of the blind is for adequate information and referral services. However, some instructional programs normally offered through rehabilitation services might be incorporated into special adult education programs for the blind. Ward (1972) describes the home teacher program, in which volunteer workers went to the homes of the blind and taught them skills that compensated for their loss of vision. Over the years, these untrained volunteers became trained specialists who operated out of rehabilitation centers. Some of the instruction provided by these home teachers, such as braille reading, may require specially skilled instructors. Others, such as telephone dialing, personal grooming, hygiene, clothing, and recognition of money, might be more readily incorporated into regular adult education programs.

One of the more interesting adult education programs for the blind is radio reading (Layne 1980). Special radio programs provide in-depth coverage of events not covered on regular news, as well as educational programs and talking books. One of the most successful of these is the Seattle Radio Talking Book Program. Skalink (1977) describes how to establish a radio reading program, including equipment and financial requirements.

The Library of Congress (1980) has published a manual on marketing services to the blind and handicapped. While the manual is written primarily for librarians, other adult educators may find it useful as well. Special federally funded libraries for the blind and physically handicapped have been in existence since 1931, and now include seventeen regional libraries and one subregional library. Two-thirds of the patrons of these libraries are the visually handicapped (Market Facts 1981). These libraries provide a wide range of services that would be of interest to adult educators (Huffman 1980; Layne 1980; Strom 1977; Wanger, Huff, and Cuadra 1981).

ADULT EDUCATION FOR THE DEAF

In the initial plan for this monograph, the author intended to consider both the blind and the deaf under one category, the sensory impaired. From a physiological standpoint, this might be a rational way of organizing the discussion. However, as the literature search proceeded, it became apparent that deafness and blindness present two radically different problems to the educator.

Glass (1974) compares deafness to blindness, noting that absence of vision does not present substantial barriers to learning and work. Primarily, blindness results in a lack of mobility. Loss of hearing, on the other hand, has only a limited effect on mobility, but it results in a loss of ability to communicate. This loss of communication ability is particularly significant among those who are classified as prelingually deaf. This classification applies to persons who lose their hearing before their basic speech and language patterns have been established, usually up to around age four or five (Hardy and Cull 1974). This loss of communication ability presents to the educator serious challenges that are not encountered in working with the blind. Whereas many of the problems of blindness are related to getting the students into the classroom, the problems of deafness have significant impact on instructional methods and procedures that may be employed. This challenge is exemplified by the following excerpt from *The Deaf Student in College* (Gallaudet College 1979):

> Deafness is subtle and paradoxical, and it ramifies far beyond the immediate disability. It imposes few physical limitations, but its effects on social life and academic performance can be severe. It cripples neither the mind nor the body but the ability to use our most elemental and pervasive form of communication, the human voice. Thus it strikes at the core of social life and of education. Many deaf students, including some you may wish to enroll, stand outside the boundaries of ordinary communication, and only special measures can stretch those boundaries to let them inside. (p. vii)

Perhaps the greatest single tribute to the unique educational problem of deafness is the existence of institutions specializing in higher education for the deaf. The establishment of Gallaudet College in 1864 and the National Technical Institute for the Deaf in 1968 demonstrates the significant problems associated with integrating the deaf into the educational process. But, as Quigley (1974) notes, the problems of incorporating the deaf into regular educational programs are not insurmountable, and the tendency to segregate the deaf places limits on educational opportunities available to them. This section will consider those problems and the lessons learned from exemplary programs providing adult education to deaf individuals.

The Deaf Population

According to Schein and Delk (1974), "Impairment of hearing is the single most prevalent chronic disability in the United States" (p. 1). Over 6 percent of the population suffers from some loss of hearing. However, severe deafness is relatively rare, with less than 1 percent of the population classified as totally deaf (defined as unable to hear and understand speech). Approximately 11 percent of the totally deaf are classified as prelingual, while nearly a quarter

lost their hearing prior to age nineteen and are classified as prevocationally deaf. A higher percentage of men than women are prevocationally deaf, but deafness has a greater impact on unemployment among women than men. Most prelingually deaf persons are born to parents with normal hearing. For this reason, the parents are usually not well prepared to deal with the limitations imposed by deafness during early childhood. The average educational level of deaf adults is lower than that of the general population, and the academic performance level of the average deaf high school graduate is below the achievement level of his or her peers. These statistical data are indicators of some of the problems that educators must consider in working with the deaf.

Social Aspects of Deafness

Cutler (1974) has defined six classes of hearing impairment, based on the individual's ability and willingness to communicate with others. At the lowest two levels are those classified as totally deaf, unable to speak; and totally deaf with deaf speech, but refusing to speak. These people have usually received all of their education in residential schools for the deaf, and their only means of communication are through use of manual alphabet, sign language, or pencil and paper. Persons in these two categories present the greatest challenge to educators, and any enterprise undertaken with these groups will probably require the services of specialists. At a minimum, they require the services of interpreters or instructors trained in manual communication.

In a third category are the deaf oralists. These people have been educated in the oralist tradition, which emphasizes use of lip reading rather than sign language or pencil and paper. Many of these individuals resent being handed pencil and paper or a handwritten message. They are more likely to participate in regularly scheduled activities with persons of normal hearing than are the deaf in other categories. They are very proud of their ability to communicate independently and will not ask for special considerations even when some consideration is required.

A fourth category defined by Cutler is the deafened. These individuals had normal hearing and speech at one time, but are now totally deaf. They have been educated in regular schools, and they normally communicate by reading lips.

Cutler's fifth category is the hard of hearing. This group has impaired hearing that can be aided by medical or surgical treatment or by sound amplification. The individual has some normal communication ability, depending on the degree of loss, and usually participates in regular educational programs

The final category identified by Cutler is the hard-of-hearing signer. This individual has some ability to communicate normally through speech amplification, but was probably educated in a residential school for the deaf and prefers to communicate through manual alphabet and sign language. While this group is generally capable of participating in regular educational activities, individuals in this category tend to avoid engaging in activities outside their deaf community.

One major category not identified by Cutler is the group of deaf individuals trained in both sign language and lip reading. Individuals in this group are capable of reading lips, but prefer to have this skill augmented by sign language and manual alphabet. While they have probably received some specialized education for the deaf, they are the group most likely to place demands on the regular adult education system. They are educated and socialized to enter the mainstream, but they need or want support services, such as interpreters, to increase their potential for learning.

While Cutler's classification scheme is useful for understanding the communications' problems of the deaf, it also recognizes another social dimension of deafness—what Cutler refers to as clannishness. Many deaf individuals, particularly those in Cutler's first, second, and sixth categories, rely almost entirely on manualism as a means of communication, and they rely almost exclusively on the deaf community for their information and social activities. Adler and Williams (1974) describe this social situation as follows:

> In essence the handicaps of deafness are psychosocial, manifesting themselves in many cases, in severe underdevelopment of the person, social isolation and unemployment or underemployment. Partially counteracting this is the unique stronghold of the organized deaf community with its network of social and athletic clubs and churches where manual communication is supreme and meets the needs of countless deaf people for information outlets and personal succor in the forms of satisfying companionship and ego satisfaction. (p. 5)

This networking tendency has both positive and negative implications for adult educators. On the positive side, it provides a vehicle for reaching the deaf community with programs designed for their special needs or with information about regular programs that may be of interest. On the negative side, the reluctance of many deaf persons to venture forth from this social isolation makes it difficult for adult educators to attract the deaf into regular program activities. Deaf adults often lack social and interpersonal skills necessary to blend into the regular classroom environments (Adler and Williams 1974; Sanderson 1980). Adding to this is the tendency of professionals as well as laypersons to stereotype the deaf and to underestimate their intelligence. Glass (1974) discusses the lack of basic understanding for the problems of deafness and the negative attitudes among the hearing that result from this ignorance. She notes that stereotyping of the deaf as dumb or retarded exists among professionals as well as laypersons. These attitudinal problems present a significant barrier to effective mainstreaming of the already-sensitive deaf persons into adult education. The following excerpt from *The Deaf in College* summarizes the situation well:

> They (the deaf) have much to teach the normally hearing. But the risks are many and not always obvious to those inexperienced with the problems of deafness. Deaf students can add a new dimension of insight and tolerance to the experience of all your students, or they and others can end up confused, disappointed and bitter. (Gallaudet College 1979, p. v)

Educational Problems of the Deaf

As if the social problems of deafness were not enough, educators must also be aware of the significant educational problems faced by many deaf adults, particularly those who were prelingually deaf. The mental abilities of the deaf are no different from those of the hearing, with one significant exception: their deficiency in verbal ability. Since most tests of learning capacity rely heavily on verbal ability, they are largely invalid for measuring the intelligence of the deaf. Reading ability among the prelingually deaf does not normally exceed sixth-grade level, due to the lack of language development (Honig and Jones 1981). Kretschner (1980) explores the characteristics and causes of inadequate language development among the deaf by providing a brief explanation of how language is perceived differently by the deaf. Kretschner's article provides valuable background information for the interested practitioner.

Gallaudet College (1979) published a booklet that identifies several problems facing educators who work with the deaf. Among the problems included in this pamphlet are (1) assessing students for admissions and placement; (2) arriving at grading standards that are fair

to the deaf as well as other students; (3) helping deaf students select appropriate courses of study; (4) preparing the staff for working with deaf students; (5) providing for interpreters; and (6) building the deaf students' expressive skills.

A big key to success in instruction is remembering that the deaf communicate with their eyes. Gallaudet (1979) provides the following tips for teachers who work with deaf students in the classroom:

- Maintain a clear line of vision between the deaf student and the instructor.
- Keep your face in plain view when speaking. This means no eating, smoking, covering the face with hands, or above all, speaking with the back turned.
- Maintain good eye contact.
- Don't have the deaf student looking directly into a light source.
- Make use of visual instructional aids.
- Allow more time than usual for responses.
- Avoid the use of colloquialisms or idiomatic language.

Programming for the Deaf

Because of the problems associated with educating the deaf, most of the adult education programs have been offered in institutions specially prepared to deal with the deaf. Gallaudet College, a federally sponsored liberal arts college for the deaf, was started in 1864. It remains the only liberal arts college for the deaf in the world. Gallaudet has a continuing education division in addition to its regular college activities. Gallaudet has provided leadership in research on education for the deaf and is one of the best sources of information in the United States on this subject. Until the 1960s, Gallaudet was the only institution of higher education devoted to deaf students. In 1965, Congress authorized the establishment of the National Technical Institute for the Deaf (NTID), which began at the Rochester Institute of Technology in 1968 (Quigley 1974). NTID complements Gallaudet by providing postsecondary technical education. In 1964, the California State University at Northridge established a program for the deaf. Unlike Gallaudet, Northridge integrates deaf students into its regular graduate and undergraduate program. In 1974, Congress established regional educational programs for the deaf at Seattle Community College, St. Paul Technical Vocational Institute, and Delgado Junior College in New Orleans (Gallaudet College 1979). This support has opened up a broad range of community college offerings to deaf students previously unserved by the educational community.

While these developments have expanded programs available to the deaf, they fall far short of providing adequate continuing educational opportunities for deaf adults. Most severely handicapped adults are in need of instruction in daily living skills, such as social skills, health and hygiene, home care, adult basic education, and sex education (Sanderson 1980; Woodrick 1980). As Sanderson noted:

> Adult (basic) education is a resource in most any community but one that is not generally available to the deaf, and most especially not to the severely disabled. (p. 6)

Woodrick suggests that, with proper assistance, most deaf adults could substantially improve their ability to live independently. A few exemplary adult education programs are beginning to reach out to the deaf, but many more are needed.

One of the pioneers in this area is the Free Library of Philadelphia, which began offering basic skills education to deaf adults in 1976. An issue of *Pivot* (Free Library 1979) discusses some of the characteristics of the program. The library employed students from the Temple University program in education for the hearing impaired. This provided them with the pool of instructors skilled in the use of American Sign Language needed for the program. Reading materials based on phonics approacnes proved of little use, but many materials designed for English as a Second Language (ESL) instruction proved quite useful. The library also used a reading series designed specifically for deaf adults, titled *Structured Tasks for English Practice*.

Perhaps the best single source of information on adult basic education (ABE) for the deaf is a booklet by Honig and Jones (1981). The booklet describes the ABE program for the deaf at Fair Lawn, New Jersey, established in 1978. It is written for administrators and teachers and provides a great deal of information on problems and successful practices. As an example, the book includes a discussion of the advantages and disadvantages of providing individualized versus group instruction in an integrated or segregated format. Fair Lawn employs segregated classes, but points out the relative merits of both methods. Fair Lawn recommends a 6:1 pupil-to-instructor ratio and the use of instructors qualified in sign language. The booklet also points out some problems in teaching reading skills to persons with poor language ability, and recommend the use of ESL materials and materials on coping skills. Additional information is provided on a variety of administrative functions related to development of the program. This booklet is "must" reading for those contemplating establishment of ABE programs for the deaf.

Harmon (1980) provides information on the Community Outreach Program for the Deaf. This program is designed to develop independent living skills in deaf adults. Information about the program is limited, but a list of evaluated materials is provided.

Pegg (1981) describes a British program, the City Lit Centre for the Deaf. The program was established initially to help servicemen deafened in World War II, and it provides a wide range of services for adults with acquired hearing loss. Among these programs are courses in lip reading, sign language, and coping skills.

A real problem to be considered in designing programs for the deaf is the availability of staff suitably trained for this work. Hardy and Cull (1974) note the lack of trained interpreters, clinical and consulting psychologists trained to work with the deaf, social workers, and rehabilitation counselors. Public Law 89-433 provides for a registry of interpreters for the deaf, a source of information that would be most valuable to directors. Additional information on programming for the deaf can be obtained from the National Association of the Deaf in Silver Spring, Maryland, or through Gallaudet College in Washington, D.C. (See Appendix for addresses of these organizations.)

ADULT EDUCATION FOR THE MENTALLY RETARDED

Education and training for the mentally retarded (MR) is an area with great growth potential for the field of adult education. Two related factors contribute to this potential: (1) the need for more education and training activities for the mentally retarded in institutions, and (2) a trend toward normalizing or deinstitutionalizing the mentally retarded. As more and more mentally retarded adults are targeted for deinstitutionalization, the need for community-based adult education programs for the mentally retarded will increase. The assumption of this role by the adult education community will require some attention to program development and staffing requirements, but there is no reason to believe that these requirements are beyond the capacity of most adult education programs.

Definitions and Categories of Mental Retardation

Several authors have noted the difficulties associated with defining and categorizing problems of mental retardation (Gearhart and Litton 1975; Klugerman 1981; MacMillan 1977). Gearhart and Litton state that "no single universally accepted definition exists to describe the condition of mental retardation" (p. 21). Classification as mentally retarded depends on (1) the prevailing sociocultural value system; (2) whether the classification is made on medical, educational, sociological, or legal grounds; (3) whether it is based on theoretical assumptions or pragmatic considerations; (4) what abilities are included in the classification scheme; (5) whether the classification is based on estimated potential or functioning abilities; and (6) whether it is possible to separate intellectual from emotional disorders. Nonetheless, some generally accepted classification systems do exist, which are more or less useful depending on the types of decisions one wishes to make about an individual.

Probably the most widely cited definition of mental retardation is that of the American Association on Mental Deficiency published in 1973:

> Mental retardation refers to significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period. (MacMillan 1977, p. 38)

This definition has three components, each of which must be satisfied in order for an individual to be classified as mentally retarded: (1) IQ must be below 70; (2) the individual must demonstrate impaired adaptive ability; and (3) these deficiencies must be manifested before age eighteen.

Terminology used to describe mental retardation is as diverse as the systems used to define it. Gearhart and Litton (1975) provide the following synonyms for mental retardation: mental subnormality, mental deficiency, mental defective, and mentally handicapped. Generally, all definitions of mental retardation exclude mental or emotional illness.

Within the general classification of mentally retarded are three subcategories that are useful in planning educational activities (Gearhart and Litton 1975):

1. *Educable mentally retarded (EMR)*—also known as high grade retarded, marginal independent, slow learner, or moron. These persons generally have IQs in the range of fifty to seventy-five, are unable to profit from regular educational activities, but have potential for academic growth and some level of social and occupational independence. The educable mentally retarded comprise 80 to 85 percent of the total MR population.

2. *Trainable mentally retarded (TMR)*—also known as moderate to severely retarded, trainable mentally handicapped, dependent retarded, developmentally young, semidependent, middle grade retarded, or imbecile. These persons generally have IQs of twenty-five to fifty, are not considered educable in the traditional sense, but can learn self-help skills, social adjustment in the family, and can become economically useful in controlled work environments. Generally, this group is institutionalized but is allowed to enter the community under supervision.

3. *Profoundly retarded*—also known as totally dependent, custodial, severely retarded, severe mental deficiency, untrainable, low-grade retarded, or idiot. These persons are generally in the IQ range of zero to twenty-five, and are not expected to acquire sufficient self-care, social, or economic skills to survive on their own outside of an institutionalized environment. They seldom, if ever, depart from the institutional setting.

Of the three categories described above, the one of greatest interest to adult educators is the EMR group, and possibly some of the higher TMR group. Most of the TMR and all of the profoundly retarded require more supervision and attention than the average adult education program would be able to provide. The types of training methods used with the lower classification clients fall into the behavior modification categories, and require intensive instructional programs that are feasible only in an institutional setting.

Educational Problems

Kreps and Black (1980) claim that 85 percent of the mentally retarded can learn to adapt to independent living in the community. They attibute the failure to do so to lack of motivation, institutional environment, and negative public attitudes. Klaber (1969) supports this claim by noting that the institutionalized mentally retarded spend one-third to one-half of their time doing nothing. Bjarnes and Butler (1974) report that previously institutionalized mentally retarded spend less than 3 percent of their time working on goal directed behavior. It is not always clear whether these different researchers are reporting on the same categories of individuals, but there is general consensus that institutions for the mentally retarded expend most of their efforts on the warehousing or custodial function and very little on education or training (Potter 1978).

Recent court decisions and public pressure are changing the situation, however. Most authors see the 1970s and 1980s as a transition period in the treatment of the mentally retarded, with strong emphasis on normalization and deinstitutionalization (Gearhart and Litton 1975; Matson 1981; Snider and Roderfeld 1979). Reflecting this trend, the College for Living at Metropolitan State College in Denver has a philosophy that states that every person can learn something, that all persons have a right to an education, and that this education should take place in the least restrictive environment. The field of rehabilitation is moving in this direction, and adult educators can play an important role in its success.

While the instructional techniques used with the mentally retarded are similar to those employed in other situations, Howard (1975) notes that the mentally retarded respond to instruction with a wide range of behaviors requiring considerably more patience on the part of the instructor. Howard suggests that the retarded should be treated as normal but not be

expected to respond that way. She notes that they have difficulty focusing their attention on a task or stimulus and are easily distracted by peripheral stimuli. They tend to over- or underrespond in intensity and frequency to certain stimuli and have difficulty in matching an appropriate response with a situation. They are easily frustrated and often experience difficulty in expressing thoughts and ideas. Potter (1978) suggests that many problems encountered in training the mentally retarded may be due to inappropriate verbal strategies. She has demonstrated that adults with moderate to severe retardation can be provided with work skills and basic living skills through experiential learning.

Programming for the Mentally Retarded

The major problem in developing instructional programs for the retarded is not how to teach them but what to teach them. As discussed in the previous section, educational techniques required to teach retarded adults do not differ greatly from those used with regular students. More important is the selection or design of an appropriate curriculum for each individual. As Snider and Roderfeld (1979) point out, it is difficult to define the needs of this diverse population because most of them are not yet self-sufficient. They describe the College for Living program begun at Metropolitan State College in Denver in 1974. An average of sixty-five mentally retarded adults attend fourteen different noncredit courses in coping skills, life skills, and basic academic skills each semester. Classes are limited to a maximum of ten students to provide for maximum individualization.

Matson (1981) has successfully employed a competency-based approach to instruction called independence training to teach community adaptation skills to mildly retarded adults. A life skills requirement, such as grocery shopping, is analyzed by task and broken down into a series of well defined behavioral objectives. For example, Matson's task analysis of grocery shopping provides the following checklist of behaviors:

1. Select store
2. Enter proper door
3. Attend to traffic flow
4. Select a shopping cart
5. Read shopping list and locate items
6. Go to proper zone in store
7. Find items
8. Select an appropriate quantity
9. Check grocery list
10. Line up at checkout counter
11. Place items on counter
12. Handle money appropriately

13. Remove groceries from store

Matson conducts his classes using small groups on-site to allow for *in vivo* modeling, self-evaluation, immediate feedback, and social reinforcement. While Matson employs this method in a rehabilitation setting, it is perfectly adaptable for any general adult education program.

Klugerman (1980) describes the development of a school-based community program for the mentally handicapped that includes instruction in communications and basic skills, sex education, grooming, personal hygiene and health, shopping and food preparation, clothing maintenance, arts and crafts, dance, and social activities. In her sourcebook describing the project, Klugerman discusses staffing requirements, staff development, facilities, scheduling, and transportation. It is recommended reading for any program director who wants to serve the needs of this special population.

The ERIC system is an excellent source of curricula designed for mentally retarded adults. Among the course descriptions available through this system are a curriculum for preparing retarded adults to seek a job (Tesolowski 1979), a series of twenty curriculum guides developed by the College for Living (1976-1977), and the *Activities of Daily Living* curriculum developed by Magic Valley Rehabilitation Services (1978).

SUMMARY

Because it is largely self-supporting, adult education tends to be free of many of the constraints imposed upon public schools and higher education. Operating largely beyond the close scrutiny of concerned parent groups, zealous alumni associations, or bureaucratic funding requirements, adult education agencies are able to pursue the best interests of the community as a whole, with a minimum of regulation.

Adult education services to the handicapped follow this general model as well. They are provided as a public service to meet the needs of an important segment of the community rather than in response to the mandates of legislation. In some respects this is bad, because adult educators have had insufficient incentive to develop programs for the handicapped. On the other hand, those programs that have been developed have succeeded because they were fashioned out of a sense of community responsibility rather than legal obligation.

The problems of programming for the disabled are many. The potential revenues will probably not justify the effort, but the rewards of serving the needs of the handicapped go beyond a balanced budget. They involve the satisfaction of serving a need that has been largely ignored in the past, of reducing the handicapping conditions of the disabled in our society, and of building tolerance and understanding of the real problems of the disabled.

This monograph has explored the problems of providing continuing education to the blind, the deaf, the mentally retarded, and the physically disabled. It has attempted to pull together some of the best advice on how to address these problems, examining the experiences of exemplary programs in each of these areas. Some problems can be easily addressed. Others require materials and skilled services beyond the resources of many programs. It is doubtful that any one program can fully address the needs of each of these target groups successfully, but all adult educators can use several of the ideas addressed in this monograph to improve their services in some areas. As services to the handicapped move out of their highly centralized institutional bases, adult educators will be called upon to provide many additional services. It is hoped that this monograph will be a starting point for meeting those needs.

APPENDIX

RESOURCES PROVIDING INFORMATION AND SERVICES FOR HANDICAPPED PERSONS

There are many agencies, organizations, and associations that provide information about handicapping conditions and supporting services for handicapped individuals. The list that follows is merely intended as a starting place for the user.

General Resources

Arts and Special Constituencies Project, National Endowment for the Arts, 1419 27th Street, NW, Washington, DC 20007; (202) 333-1712, 333-1339/TTY

> The project issues reports aimed especially at art programs and facilities. Topics include access to cultural facilities, legal rights, design, schools offering courses on barrier-free design, access to schools of architecture, and others. The newsletter, *alert*, is available free. Materials available. Contact Larry Molloy.

Clearinghouse on the Handicapped, Office of Information and Resources for the Handicapped, Office of Special Education and Rehabilitative Services, U.S. Department of Education, Room 3106, Switzer Building, Washington, DC 20202; (202) 245-0080.

> The Clearinghouse was created by the Rehabilitation Act of 1973 to enhance the flow of disability-related information to handicapped individuals and service providers. It responds to inquiries on wide-ranging topics concerning handicapping conditions and related services, and is especially knowledgeable in areas of federal funding for programs serving disabled people, federal legislation affecting the handicapped community, and federal programs benefitting people with handicapping conditions. It publishes a bimonthly information bulletin, *Programs for the Handicapped*, which focuses on federal activities affecting the handicapped.

Closer Look, PO Box 1492, Washington, DC 20013; (202) 833-4160

> Closer Look, the National Information Center for the Handicapped, provides practical advice on how to find educational programs and other kinds of special services for handicapped children and youth. Closer Look publications, newsletter, and information packets are free.

ERIC Clearinghouse on Adult, Career, and Vocational Education (ERIC/ACVE), The National Center for Research in Vocational Education, The Ohio State University, 1960 Kenny Road, Columbus, OH 43210; (800) 848-4815 or (614) 486-3655.

ERIC Clearinghouse on Handicapped and Gifted Children (ERIC/EC), Council for Exceptional Children, 1920 Association Drive, Reston, VA 22091; (703) 620-3660.

> Educational Resources Information Center (ERIC) is a nationwide educational information system sponsored by the National Institute of Education. There are sixteen ERIC Clearinghouses responsible for acquiring material for the ERIC database in assigned scope areas. Contact ERIC/ACVE and ERIC/EC for information on handicapping conditions as they relate to adults in educational settings. The clearinghouses produce information bulletins, short bibliographies, and fact sheets on various topics and each has a mailing list.

Handicapped Americans Reports, Capitol Publications, Inc., [illegible] Pennsylvania Avenue, NW, Washington, DC 20037; (202) 452-1600

Handicapped Americans Reports is a bi-weekly newsletter that keeps track of news, issues, and people concerned with disabilities in the United States. Reports about federal legislation and activities that affect disabled people are issued. One year, 26 issues, $127.

HEATH (Higher Education and the Handicapped) Resource Center, P.O. Box 1492, Washington, DC 20013; (202) 833-4707 (Voice/TTY)

The Resource Center is a national clearinghouse of information about support services for disabled students in postsecondary institutions in the United States. It publishes a news bulletin three times a year; develops and disseminates fact sheets and packets of materials about topics of concern to disabled students, postsecondary administrators, campus support service providers, and advisors of disabled potential students; and publishes a resource directory. For telephone consultations, to request materials, or to be placed on the mailing list, contact Rhona C Hartman, Director.

Information and Research Utilization Center, American Alliance for Health, Physical Education, Recreation and Dance, 1900 Association Drive, Reston, VA 22091; (703) 476-3464

The Center offers specific guidance in developing activities for people with a particular disability, or guidance in more general areas such as planning an overall athletic program or mainstreaming people with disabilities into competitive teams. It provides needs assessments of programs and facilities, long-term consultative services, and publications. Referral services are free of charge, while on-site fees for technical assistance vary according to expenses. Contact Julian Stein.

National Center for a Barrier Free Environment, Suite 1006, 1140 Connecticut Avenue, NW, Washington, DC 20036; (202) 466-6896 (Voice/TTY), or Access Information Number (toll-free) at (800) 424-2809 (Voice/TTY)

The National Center offers a variety of information, education, and technical assistance services designed to promote and assist in the elimination of architectural barriers. Call for information at the toll-free number above. Publishes a newsletter, *REPORT*, and several other publications.

Rehabilitation International USA, 20 W. 40th Street, New York, NY 10018; (212) 869-9907

An American affiliate of a global network of rehabilitation organizations, it maintains a Rehab Film Library as an audiovisual clearinghouse on international rehabilitation materials. *The 1981-1982 International Directory of Access Guides*, which is a compendium of over 350 publications on accessibility to cities, transportation systems, and hotel chains, is available free.

U.S. Council for the International Year of Disabled Persons, 1575 "Eye" Street, NW, Suite 430, Washington, DC 20005; (202) 638-6011 (Voice) or 842-2161 (TTY)

The United Nations proclaimed 1981 as the International Year of Disabled Persons. The U.S. Council is seeking to build partnerships to unite disabled and nondisabled people in every sector of society. "Partners" include mayors, governors, institutions, organizations, business, and labor. Several publications are available, including some in braille and tape.

Blindness and Vision Impairment

American Council of the Blind (ACB), 1211 Connecticut Avenue, NW, Suite 506, Washington, DC 20036; (202) 833-1251

An organization composed primarily of blind persons, ACB provides many services to members and acts as a national clearinghouse on blindness. ACB publishes *Braille Forum*, and provides research and advocacy on service delivery issues. Descriptive literature available on request.

American Printing House for the Blind (APHB), PO Box 6085, Louisville, KY 40206; (502) 895-2405

This national nonprofit printing house provides information about new materials and educational aids, as well as the availability of textbooks in braille, large type, on records, and on cassette tape. They answer inquiries and make referrals to other information sources and service providers, and prepare bibliographies, abstracts, or indices in response to certain direct requests. Print catalogs of several types of items manufactured by APHB, including a braille music catalog, are available.

Library of Congress, National Library Service for the Blind and Physically Handicapped, Washington, DC 20452; (202) 287-5100

The Library of Congress has a Union Catalog that lists books currently available in braille or on recordings. Contact the Consumer Relations Section for any question about types of materials needed. Descriptive literature available.

National Federation of the Blind, National Blindness Information Center, 1800 Johnson Street, Baltimore, MD 21230; (301) 659-9314

The Information Center answers questions about blindness, refers people to appropriate resources, and can send a publication list. "Handbook for Blind College Students" can be ordered from the above address by prepaying $2.25.

Recording for the Blind (RFB), Inc., 215 E. 58th St., New York, NY 10022; (212) 751-0860

Taped educational books for blind and physically handicapped students are available free. Currently, RFB has over forty-two thousand titles steadily augmented by the input of over forty-eight hundred trained volunteers in twenty-nine centers around the country. Application forms and descriptive literature are available on request.

Deaf and Hearing Impairment

Alexander Graham Bell Association for the Deaf, 3417 Volta Place, NW, Washington, DC 20007; (202) 337-5220 (Voice/TTY)

This is a publication and information center about deafness. Lip reading and use of residual hearing for oral communication differentiates this group from those espousing manual communication (sign language). Materials are designed for parents, teachers, and deaf-oral adults. Descriptive literature and a publications list are available on request.

Gallaudet College Press, Division of Public Services, Kendall Green, 7th and Florida Avenue, NE, Washington, DC 20002; (202) 651-5591 (Voice/TTY)

Publications available include the *Deaf Student in College*, a two booklet portfolio that outlines how to meet the needs of deaf students in mainstreamed settings. It also describes over sixty deaf student programs currently available on campuses across the country (free). "Whole Kit and Caboodle" and "Teacher's Resource Kit" are among the many publications available from the Division of Public Services. The second kit is a system for sensitizing hearing teachers of deaf adults. Write for the publications list for the price of these kits and other resources.

National Association of the Deaf (NAD), 814 Thayer Avenue, Silver Spring, MD 20910; (301) 587-1788 (Voice/TTY)

This national consumer membership association of the deaf can provide general information about the deaf. NAD publishes *The Deaf American* monthly ($6/yr.), *The Broadcaster*—a monthly newspaper ($6/yr.); and also sponsors an association for parents of deaf children ($10 membership). Information packet available on request.

National Registry of Interpreters for the Deaf, 814 Thayer Avenue, Silver Spring, MD 10910; (301) 588-2406 (Voice/TTY)

Issues ten Regional Directories for certified interpreters. Each Directory—corresponding to each federal region—is available for $2.00. The Directories provide information about certification, costs, availability, training, and other useful material. For example, the fee for certified interpreter services ranges from $5.50 to 12.50 per hour.

National Technical Institute for the Deaf (NTID), Rochester Institute of Technology, One Lomb Memorial Drive, Rochester, NY 14623; (716) 475-6748 (Voice/TTY)

Project Outreach serves as a resource to other educational institutions involved in mainstreaming deaf people into regular classes. NTID conducts training programs for interpreters, notetakers, and tutors, and can advise other colleges on setting up similar programs. Descriptive material available on written request.

Mental Retardation/Developmental Disabilities

American Association of University Affiliated Programs for the Developmentally Disabled, 1234 Massachusetts Ave, NW, Suite 813, Washington, DC 20005; (202) 737-1511

This organization provides information on education and employment in professions serving developmentally disabled individuals. In addition, it makes available publications on how to improve services for development ally disabled individuals.

Association for Retarded Citizens (ARC), National Headquarters, 2501 Avenue J, Arlington, TX 76011; (817) 640-0204

ARC answers inquiries about mental retardation through publications or by letter. It also makes referrals to ARC volunteers around the country who are specialists in particular areas such as education, vocational programming, and so forth.

People First International, Inc., P.O. Box 12642, Salem, OR 97309; (503) 362-0336

An organization of mentally retarded and developmentally disabled individuals who meet to learn leadership skills and how to advocate for themselves. Information about People First and technical assistance to help set up programs are available from the organization.

Attitudes

Disability Information Center, University of Southern Maine, 246 Deering Avenue, Portland, ME 04102

This center stems from a 1977 update of a study of the needs of disabled people in Maine. As a result of the literature search, an extensive collection of publications exists and may be tapped. A bibliography of these materials, *The Disabled and Related Needs Areas*, is available. A film index, *Disability Attitudes*, is also available for a small fee.

Handicapped Learner Materials Distribution Center, Audio-Visual Center, Indiana University, Bloomington, IN 47405

Films, kits, games, and adaptive devices may be borrowed from this center. Films are available on a loan basis, with the borrower paying return postage. Eligibility requirements and a materials catalog will be sent upon request.

Mainstream, Inc., 1200 15th Street, NW, Washington, DC 20005

With employment, education, and other civil rights of handicapped people as its aim, Mainstream conducts conferences nationally and operates other information programs on affirmative action for disabled people. A toll-free hotline (800-424-8089) concentrates on federal laws affecting disabled people, especially Sections 503 and 504 of the 1973 Rehabilitation Act. Write for their publications list and for subscription information for the bimonthly newsletter, *In The Mainstream*.

The President's Committee on Employment of the Handicapped (PCEH), 1111 20th Street, NW, Washington, DC 20210

With job training and employment for disabled people as its first concern, PCEH strives to create greater community acceptance of persons with special needs. A publications list and film list are available, as well as a monthly magazine, *Disabled USA*.

Rehabfilm, International Rehabilitation Film Review Library, 20 West 40th Street, New York, NY 10018

The library's collection of films may be rented or purchased by schools, health organizations, and hospitals for training and public awareness purposes. They publish the *International Rehabilitation Film Review Catalogue* and the *Rehabfilm* newsletter, which is devoted to the media and handicapped persons.

Regional Rehabilitation Research Institute on Attitudinal, Legal, and Leisure Barriers, George Washington University, 1828 L Street, NW, Suite 704, Washington, DC 20036

The Institute's research activities have resulted in a lively series of booklets, each focusing on a different set of attitudinal barriers. Materials are produced for both rehabilitation professionals and for the general public. Their free publications list includes *Attitudes and Disability: A Selected Annotated Bibliography, 1975-77*.

Directories and Guides

A Guide to College/Career Programs for Deaf Students, 1981 Edition. Washington, DC: Office of Demographic Studies, Research Institute, Gallaudet College, 1981.

Available from Gallaudet College Press, Division of Public Services, Kendall Green, 7th and Florida Avenues, NE, Washington DC 20002; (202) 651-5591.

1980 Directory of National Information Sources on Handicapping Conditions and Related Services. Washington, DC: Office of Information and Resources for the Handicapped, Office of Special Education and Rehabilitative Services, U.S. Department of Education, 1980.

Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. $7.50, Stock No. 017-091-00234-7.

Resource Guide: Architectural Barriers Removal, (E) 80-22006.

A guide to information resources, funding, and publications available from federal sources, compiled to aid in the development of a barrier-free environment. Published in 1980, 34 pages.

Resource Guide: Recreation and Leisure for Handicapped Individuals, (E) 80-22004

Designed for professionals and administrators, this is a guide to information resources, funding, and publications, to aid in the development of recreational programs and leisure-time activities for handicapped persons.

Both *Resource Guides* are available from the Clearinghouse on the Handicapped, Office of Information and Resources for the Handicapped, Office of Special Education and Rehabilitation Services, U.S. Department of Education, Room 3106, Switzer Building, Washington, DC 20202; (202) 245-0080.

REFERENCES

Adler, E. P., and Williams, B. R. "Services to Deaf People in the Seventies." In *Educational and Psychological Aspects of Deafness*, edited by R. E. Hardy and J. C. Cull. Springfield, IL: Charles C. Thomas, 1974.

American Alliance for Health, Physical Education, Recreation and Dance. *Principles and Practices for Championship Performances in Wheelchair Field Events*. Reston, VA: American Alliance, 1980. (ERIC Document Reproduction Service No. ED 207 309).

American Alliance for Health, Physical Education, Recreation and Dance. *Principles and Practices for Championship Performances in Wheelchair Track Events*. Reston, VA: American Alliance, 1979. (ERIC Document Reproduction Service No. ED 197 538).

Anthony, W. A. "Societal Rehabilitation: Changing Society's Attitudes Toward the Physically and Mentally Disabled." In *The Psychological and Social Impact of Physical Disability*, edited by R. Marinelli and A. Dell Orto. New York, NY: Springer Publishing, 1977.

Arsenault, G. "Visually Impaired." In *College for Living Instructor's Manual*, edited by M. Heneghan and B. Heneghan. Washington, DC: Gallaudet College, 1979. (ERIC Document Reproduction Service No. ED 205 227).

Baumann, M. K. "Research on Psychological Factors Associated with Blindness." In *Social and Rehabilitation Services for the Blind*, by R. E. Hardy. Springfield, IL: Charles C. Thomas, 1972.

Bennet, J. M. "Films on Handicaps." *Sightlines* 10 (Winter 1976-77): 4-9.

Bjarnes, A. J., and Butler, E. W. "Environmental Variation in Community Care Facilities for Mentally Retarded Persons." *American Journal of Mental Deficiency* 78 (1974): 429-39.

Bowe, F. G. "Transportation: A Key to Independent Living." In *Rehabilitating People with Disabilities into the Mainstream of Society*, by A. D. Spiegel and S. Podair. Park Ridge, NJ: Noyes Medical Publications, 1981.

Cahak, M. "Orthopedically Impaired." In *College for Living Instructor's Manual*, edited by M. Heneghan and B. Heneghan. Washington, DC: Gallaudet College, 1979. (ERIC Document Reproduction Service No. ED 205 227).

Cogswell, B. E. "Self-socialization: Readjustment of Paraplegics in the Community." In *The Psychological and Social Impact of Physical Disability*, edited by R. Marinelli and A. Dell Orto. New York, NY: Springer Publishing, 1977.

College for Living. *Community Living Skills Guides*. Denver, CO: Metropolitan State College, 1976-77. (ERIC Document Reproduction Service Nos. ED 185 263 through ED 185 282).

Coons, M., and Milner, M., eds. *Creating an Accessible Campus*. Washington, DC: Association of Physical Plant Administrators of Universities and Colleges, 1978. (ERIC Document Reproduction Service No. ED 175 080).

Council for Exceptional Children. *Policy Issues for Assuring the Delivery of Continuing Education Programs for Handicapped Persons*. Washington, DC: Council for Exceptional Children, October 1980. (ERIC Document Reproduction Service No. ED 201 136).

Cutler, S. J. "The Totally Deaf, the Deafened, the Hard of Hearing, and the Hard of Hearing Signer." In *Educational and Psychological Aspects of Deafness*, edited by R. E. Hardy and J. C. Cull. Springfield, IL: Charles C. Thomas, 1974

Dickman, I. R. *Outreach to the Aging Blind: Some Strategies for Community Action*. New York, NY: American Foundation for the Blind, 1977.

English, W. R. "Correlates of Stigma toward Disabled Persons." In *The Psychological and Social Impact of Physical Disability*, edited by R. Marinelli and A. Dell Orto. New York, NY: Springer Publishing, 1977.

Free Library of Philadelphia. *Pivot* (March 1979).

Gallaudet College. *The Deaf Student in College*. Washington, DC: Gallaudet College, 1979.

Gearhart, B. R., and Litton, F. W. *The Trainable Retarded*. St. Louis, MO: C. V. Mosby, 1975.

Glass, A. "Deafness and Its Effects." In *Educational and Psychological Aspects of Deafness*, edited by R. E. Hardy and J. C. Cull. Springfield, IL: Charles C. Thomas, 1974.

Hardy, R. E., and Cull, J. C., eds. *Educational and Psychological Aspects of Deafness*. Springfield, IL: Charles C. Thomas, 1974.

Harmon, D. "Evaluation for Independent Living Skills." In *Independent Living Skills for the Severely Handicapped Deaf Person Preparing to Enter Gainful Employment*. Monograph No. 5, edited by S. Ouellette and G. Lloyd. Silver Spring, MD: American Deafness and Rehabilitation Association, 1980.

Harris, C. G. *Dance for Students with Orthopedic Conditions—Popular, Square, Folk, Modern, and Ballet*. Reston, VA: American Alliance for Health, Physical Education, Recreation and Dance, April 1979. (ERIC Document Reproduction Service No. ED 207 304).

Hollander, P. "Higher Education and the Handicapped: Current Status and Future Prognosis." In *Higher Education: The Law and the 1980s in Perspective. Proceedings*, edited by D. P. Young. Athens, GA: University of Georgia Center for Continuing Education, 1979. (ERIC Document Reproduction Service No. ED 195 037).

Honig, J., and Jones, J. *Adult Basic Education for the Deaf*. Fair Lawn,NJ: Fair Lawn Community School, 1981.

Howard, M. "Adult Training Centres—the Trainees and Their Instructors." *Adult Education* (London) 48 (1975): 88-94. (ERIC No. EJ 123 779).

Huffman, E. "Library Service for the Deaf, Blind, and Physically Disabled People in the United States, 1977-1979: An Annotated Bibliography." Masters thesis, University of North Carolina, 1980.

Jeffrey, D. A. "A Living Environment for the Physically Disabled." *Rehabilitation Literature* 34 (April 1973): 98-103. (ERIC No. EJ 079 688).

Jones, M. A., and Catlin, J. H. "Design for Access." In *Rehabilitating People with Disabilities into the Mainstream of Society*, by A. D. Spiegel and S. Podair. Park Ridge, NJ: Noyes Medical Publications, 1981.

Jordan, D. "Learning Disabilities and the ABE Student." Workshop address delivered at the Harper Adult Basic Education staff development workshop. Wheeling, Illinois, April 1977.

Klaber, M. M. "The Retarded and Institutions for the Retarded—A Preliminary Report." In *Psychological Problems in Mental Deficiency*, 4th edition, by S. B. Sarason. New York, NY: Harper and Row, 1969.

Klugerman, P. B. *Programming for the Adult Mentally Handicapped. Source Book*. East Brunswick, NJ: Board of Education, 1980. (ERIC Document Reproduction Service No. ED 194 772).

Klugerman, P. B. "The Effect of Self-Esteem Counseling on the Growth of Skill Ability and Self-Esteem in Adult Mentally Handicapped Learners." Doctoral dissertation, Rutgers University, 1981.

Knowles, M. *The Modern Practice of Adult Education*. New York, NY: Association Press, 1970.

Kreps, A. R., and Black, J. L. "The College for Living: Self Reliance through Experiential Learning." In *Independent Living Skills for the Severely Handicapped Deaf Person Preparing to Enter Gainful Employment*. Monograph No. 5, edited by S. Ouellette and G. Lloyd. Silver Spring, MD: American Deafness and Rehabilitation Association, 1980.

Kretschner, R. E. "Graphic Language by and for the Deaf." In *Independent Living Skills for the Severely Handicapped Deaf Person Preparing to Enter Gainful Employment*. Monograph No. 5, edited by S. Ouellette and G. Lloyd. Silver Spring, MD: American Deafness and Rehabilitation Association, 1980.

Kurzweil, R. C., and Unger, B. "Kurzweil Reading Machine for the Blind: Development and Dissemination." *DIKTA* 2 (Winter 1977): 165-169.

Ladieu-Leviton, G.; Adler, D. L.; and Dembo, T. "Studies in Adjustment to Visible Injuries: Social Acceptance of the Injured." In *The Psychological and Social Impact of Physical Disability*, edited by R. Marinelli and A. Dell Orto. New York, NY: Springer Publishing, 1977.

LaVor, M. "Section 504: Past, Present, and Future." In *Rehabilitating People With Disabilities into the Mainstream of Society*, by A. D. Spiegel and S. Podair. Park Ridge, NJ: Noyes Medical Publications, 1981.

Layne, E. N. *Serving Citizens with Special Needs: How Libraries Can Enrich the Lives and Fulfill Aspirations for the Elderly and the Handicapped, the Functionally Illiterate, Hispanic Americans, Native Americans, the Homebound and Inmates of Correctional Institutions.* New York, NY: National Citizens Emergency Committee to Save Our Libraries, 1980. (ERIC Document Reproduction Service No. ED 197 728).

Library of Congress. *Reaching People: A Manual on Public Education for Libraries Serving Blind and Physically Handicapped Individuals.* Washington, DC: Library of Congress, 1980. (ERIC Document Reproduction Service No. ED 195 235).

Lukoff, I. F., and Whiteman, M. *The Social Sources of Adjustment to Blindness.* Research Series. No. 21. New York, NY: American Foundation for the Blind, n.d.

MacMillan, D. *Mental Retardation in School and Society.* Boston, MA: Little, Brown and Co., 1977.

Magic Valley Rehabilitation Services, Inc. *Activities of Daily Living Curriculum for Handicapped Adults.* Twin Falls, ID: College of Southern Idaho, 1978. (ERIC Document Reproduction Service No. ED 188 007).

Marinelli, R. P., and Dell Orto, A., eds. *The Psychological and Social Impact of Physical Disability.* New York, NY: Springer Publishing, 1977.

Market Facts. *Readership Characteristics and Attitudes: Service to Blind and Physically Handicapped Users.* Washington, DC: Library of Congress, 1981. (ERIC Document Reproduction Service No. ED 208 890).

Matson, J. L. "Use of Independence Training to Teach Shopping Skills to Mentally Retarded Adults." *American Journal of Mental Deficiency* 86 (1981): 173-183.

May, E.; Waggoner N ; and Hutte, E. B. *Independent Living for the Handicapped and the Elderly.* Boston, MA: Houghton-Mifflin, 1974.

Monbeck, M. *The Meaning of Blindness.* Bloomington, IN: Indiana University Press, 1974.

Park, L. D. "Barriers to Normality for the Handicapped Adult in the United States." In *Social and Psychological Aspects of Disability*, edited by J. Stubbins. Baltimore, MD: University Park Press, 1977.

Pegg, K. "The City Lit Centre for the Deaf." *Adult Education* (London) 54 (September 1981): 120-127.

Potter, S. B., ed. *Vocational Services Expansion Project. End-of-the-Project Report, 1975-78.* Ann Arbor, MI: Institute for the Study of Mental Retardation, 1978. (ERIC Document Reproduction Service Nos. ED 186 624-625).

Quigley, S. P. "The Deaf Student in Colleges and Universities." In *Educational and Psychological Aspects of Deafness*, edited by R. E. Hardy and J. C. Cull. Springfield, IL: Charles C. Thomas, 1974.

Roessler, R. T. *Strategies for Evaluating Independent Living Programs.* Fayetteville, AK: Arkansas Rehabilitation Research and Training Center, October 1981. (ERIC Document Reproduction Service No. ED 208 199).

Sanderson, R. G. "The Need for Independent Living Skills for Employment of Severely Handicapped Individuals." In *Independent Living Skills for the Severely Handicapped Deaf Person Preparing to Enter Gainful Employment*. Monograph No. 5, edited by S. Ouellette and G. Lloyd. Silver Spring, MD: American Deafness and Rehabilitation Association, 1980.

Schein, J. D., and Delk, M. T. *The Deaf Population of the United States*. Silver Spring, MD: National Association of the Deaf, 1974.

Skalink, B. "Radio Reading for the Print Handicapped." *Educational Broadcasting* 10 (January-February 1977): 23-26.

Smith, L. J. "Training Severely and Profoundly Mentally Handicapped Nocturnal Enuretics." *Behaviour Research and Therapy* 19 (1981).

Snider, J., and Roderfeld, J. "College for Living: Continuing Education for the Disabled." *Lifelong Learning: The Adult Years* 3 (December 1979): 16-19. (ERIC No. EJ 219 201).

Spiegel, A. D., and Podair, S. *Rehabilitating People with Disabilities into the Mainstream of Society*. Park Ridge, NJ: Noyes Medical Publiations, 1981.

Strom, M. G. *Library Services for the Blind and Physically Handicapped*. Metuchen, NJ: Scarecrow Press, 1977.

Tesolowski, D. G. *Job Readiness Training Curriculum*. Menomonie, WI: Materials Development Center, Stout Vocational Rehabilitation Institute, February 1979. (ERIC Document Reproduction Service No. ED 186 747).

Wanger, J.; Huff, J.; and Cuadra, R. *Automated Circulation Systems in Libraries Serving the Blind and Physically Handicapped: A Reference Guide for Planning*. Santa Monica, CA: Cuadra Associates, Inc., 1981. (ERIC Document Reproduction Service No. ED 205 221).

Ward, R. J. "Rehabilitation Teaching." In *Social and Rehabilitation Services for the Blind*, by R. E. Hardy. Springfield, IL: Charles C. Thomas, 1972.

Weisel, L. P. *Adult Learning Problems: Insights, Instruction, and Implications*. Information Series No. 214. Columbus, OH: ERIC Clearinghouse on Adult, Career, and Vocational Education, The National Center for Research in Vocational Education, The Ohio State University, 1980. (ERIC Document Reproduction Service No. ED 193 534).

Wells, J. H. "Adult Education and Disadvantaged: The Special Needs of Physically Handicapped Students." *Adult Education* (London) 49 (March 1977): 359-366.

Woodrick, W. E. "Introduction to Independent Living Skills and Presentation of Objectives." In *Independent Living Skills for the Severely Handicapped Deaf Person Preparing to Enter Gainful Employment*. Monograph No. 5, edited by S. Ouellette and G. Lloyd. Silver Spring, MD: American Deafness and Rehabilitation Association, 1980.